

## **ABSTRACT OF THE DISCLOSURE**

A method of designing the cavity length for a tunable laser light source is disclosed. The performing steps are described as follows. Select a waveband for standard reference according to the International Telecommunication Union specification. Determine a  
5 constant that is a lowest multiplier for transforming all the frequencies among the band into integers. Set the optical path length of the cavity as the product of a positive number and half the product of the constant, a frequency, and the corresponding central wavelength. Then, dispose the cavity length according to the optical path length.